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Trends of Diarrheal Disease Mortality in the United States 1941 to 1946, Inclusive

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Dysentery and diarrheal diseases constitute significant public health problems, especially among infants and children. A pamphlet entitled, "The Control of Communicable Disease" published by the American Public Health Association, 1945, cites the importance of diarrheal diseases: "The reduction of high infant mortality rates is dependent upon prevention of diarrhea and enteritis" (*11*). Collins (*1*) shows that dysentery, diarrhea, and enteritis constitute a significant portion of the illnesses and mortality of infants—129 cases of illness per 1,000 infants from diarrhea and enteritis and approximately 8.0 percent of infants' deaths during 1943.

During 1945 and 1946, numerous reports to the Communicable Disease Center revealed that the incidence of diarrheal disease, cases and deaths was diminishing in rural areas and small towns where DDT residual household spray applications were made to prevent malaria transmission. Concurrently, flies were reduced notably within houses and privies. Flies have been implicated as an important factor in the spread of bacillary dysentery (*2, 6, 7, 15*).

This evidence of the significance of dysentery and diarrheal diseases and the reports of changes in the incidence of these diseases in certain areas suggested the desirability of analyzing current trends in mortality from these causes. Diarrheal disease mortality in the United States is cited from 1933 to 1946 in table 1, but for the study of current trends the data from 1941 to 1946 were used as these are strictly comparable under the International List of Causes of Death. The years 1941 to 1946 include one pre-war year and one post-war year, and this period is long enough to show recent trends in reporting mortality from these causes. Morbidity data are not included in this study because these diseases are reported inconsistently by States.

[1] From the Communicable Disease Center, Atlanta, Georgia.

The mortality data used for 1933 to 1945, are from annual publications of the Vital Statistics of the United States (*12*). Special Tabulations of the National Office of Vital Statistics provide similar information for 1946 and data for the seasonal, age, and other detailed studies presented for the 1941–1946 period (*13*). These detailed tabulations combine International List of Causes of Death—Codes 27 and 119 for decedents under 2 years of age. These data are based on the place of residence of the decedents.

This study presents the death totals attributed to diarrheal disease for the United States by years, 1941 to 1946, inclusive; deaths under 2 years of age for the same period in the United States, and for selected

Table 1. *Deaths from dysentery and diarrheal diseases for the United States by years 1933 to 1946, inclusive*

[International List of Causes of Death—Codes 27, 119 and 120, Vital Statistics of United States]

Year	Code 27	Code 119	Code 120	Total
1933	----------	15,707	5,966	21,673
1934	----------	17,019	6,192	23,211
1935	----------	13,204	4,760	17,964
1936	----------	15,612	5,339	20,951
1937	----------	14,406	4,519	18,925
1938	----------	14,107	4,401	18,508
1939	2,537	11,277	3,851	17,665
1940	2,460	10,044	3,529	16,033
1941	2,433	10,847	3,124	16,404
1942	1,877	8,951	2,823	13,651
1943	1,909	9,839	2,988	14,736
1944	1,803	10,327	2,772	14,902
1945	1,599	9,055	2,410	13,064
1946	952	6,019	2,071	9,042
Percent change 1944–46	−47.2	−41.7	−25.3	−39.3

NOTE.—Code 27 includes all forms of dysentery. Code 119 includes diarrhea, enteritis and ulceration of intestines under 2 years of age; Code 120, the same diseases 2 years of age and over.

counties where organized programs resulted in fly reduction within rural houses and privies. The study also presents mortality from diarrheal diseases by population size group and age of decedents for 1941–1946.

As indicated in table 1, the total dysentery and diarrheal deaths averaged approximately 21,000 per annum during the period 1933–1936; approximately 17,500 per annum for 1937–1941, and approximately 14,000 per annum for 1942–1945. The most significant decrease during the 1933–1946 period came in 1946. The table shows that the precipitous decrease to 9,042 in 1946 was largely in deaths attributed to Codes 27 and 119, and that the decrease in Code 120 was proportionately less than from either of the other causes of death studied.

The percentage of decrease from 1944 to 1946 is shown in the tables because factors conducive to interrupting the transmission of diarrheal diseases and to lowering mortality from these diseases became effective during 1945 following cessation of hostilities of

World War II. Among these factors were the return of physicians, health officers, public health personnel, and other health specialists from military service to civilian health services; release of DDT for public use; increased facilities for refrigeration and other methods in caring for food supplies; increased materials for the improvement of housing, screening, etc.; and shift of population from rural to urban areas and changes in birth rates. Throughout this study 1944 was used as the base year for calculating changes during 1944, 1945, and 1946.

Charted in figure 1 are the dysentery and diarrheal deaths under 2 years of age for each month and year from 1941 to 1946. Summer and

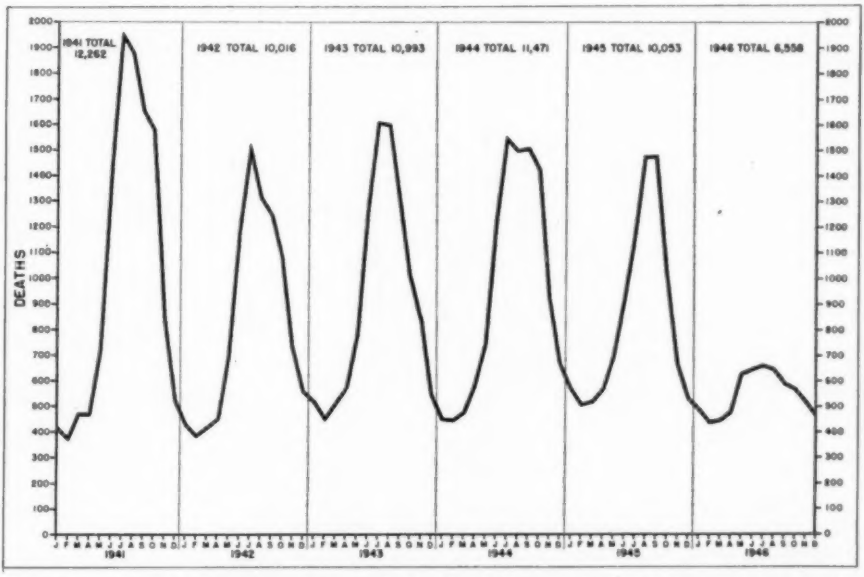

Figure 1. Deaths from dysentery and diarrheal diseases under 2 years of age for the United States by year and month, 1941–1946, inclusive (International List of Causes of Death—Codes 27 and 119)

fall months showed many more deaths than did the winter and spring months from 1941 to 1945. Deaths during the winter and spring months were approximately at the same level in all years. There was an unprecedented decrease in deaths during the summer and fall of 1946, but no change in the winter-spring level. Figure 1 indicates that the factors which produced the marked decrease in deaths from these causes during 1946 should be effective measures for the prevention of deaths from diarrheal diseases during the summer-fall seasons.

A study of each State was made in relation to the seasonal variations noted in figure 1. Each State was classified on the basis of its annual seasonal variation during the period 1941–45, and figure 2 shows the resulting arrangement of States. The "regular" group of 24

States had regular annual seasons of high incidence of diarrheal disease mortality each year from 1941 to 1945; 7 "irregular" States had inconsistent annual seasons of increased incidence; "none" indicates the 18 States in which there was no regular annual seasonal increased incidence during 1941–45. Figure 5 shows the geographic location of States by the above groupings. Figure 2 shows that the 24 "regular" States accounted for the large majority of the Nation's annual seasonal increase of diarrheal disease mortality each year of the period 1941–46.

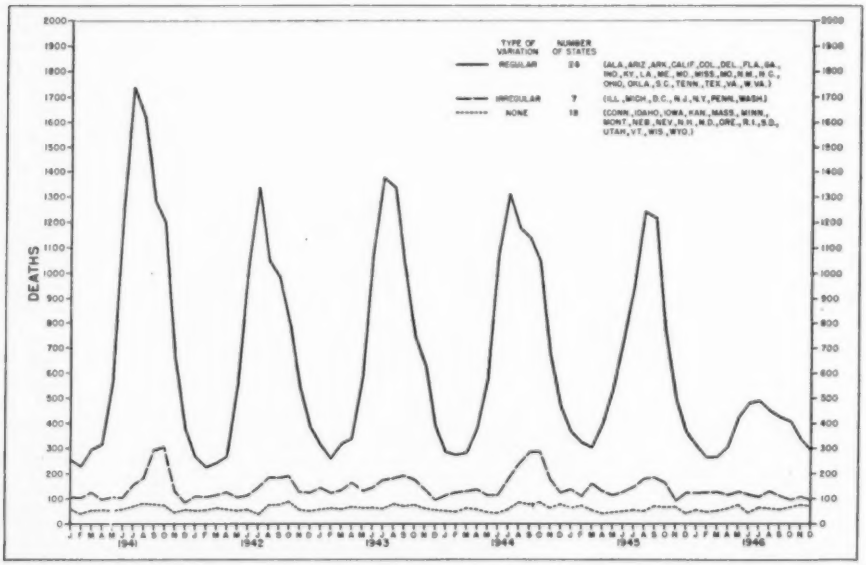

Figure 2. Death from dysentery and diarrheal diseases under 2 years of age by States grouped according to annual seasonal variation by month, 1941–1946, inclusive (International List of Causes of Death—Codes 27 and 119)

Of the 24 "regular" States, 14 showed decreased seasonal incidence of diarrheal disease mortality in both 1942 and 1946. Ten of the "regular" States—Arizona, California, Colorado, Delaware, Florida, Indiana, Louisiana, Maine, Oklahoma, and Texas—showed no decrease of seasonal variation during 1942, but all the "regular" States showed a decrease in seasonal variation during 1946. The factors operating to decrease deaths from the causes studied during 1941–42 were less extensive than those operating during the 1944–46 period. From 1944 to 1946, 43 States showed a decrease and 6 States showed an increase. There was a range in percentage of change among the States from plus 58.8 in New Hampshire to minus 80.4 in Delaware. The decrease which occurred in the 14 "regular" States during 1941–42 was proportionately much less than the decreases which occurred during the 1944–46 period in these same States.

Of the general factors conducive to decreasing diarrheal disease mortality, population migration out of rural and small city areas due to World War II influences (*14*) may have been important since the other mentioned factors do not apply during 1941–42. Chemotherapy, in the form of sulfa drugs, of diarrheal disease was being extended during the 1941–42 period and its importance in this decrease of mortality should not be underestimated (*3, 10*). Fradkin states that such chemotherapy ". . . is highly recommended for the treatment of acute and chronic diarrhea caused by the *Shigella* group of organisms" (*2*). The seasonal incidence of bacillary dysentery (shigellosis) is well known (*4*).

Figure 2 shows diarrheal deaths under 2 years of age by month for each State group as classified by annual seasonal variation, 1941 to 1945. The decrease of diarrheal disease mortality, under 2 years of age, from 1944 to 1946 was associated much more closely with the

Table 2. *Deaths from dysentery and diarrheal diseases, under 2 years of age, State groups by population size group of decedents, and by age of decedents, 1944–46, inclusive*

[International List of Causes of Death—Codes 27 and 119]

Year	Total	Population size group					Age		
		100,000 and over	25,000–100,000	10,000–25,000	2,500–10,000	Rural	Under 1 month	1–11 months	1–1.9 years
United States total									
1944	11,471	2,204	1,276	855	1,531	5,605	1,584	8,649	1,238
1945	10,053	2,029	1,158	771	1,375	4,722	1,563	7,596	894
1946	6,558	1,580	773	534	849	2,822	1,418	4,560	580
Percent change, 1944–46	−42.8	−28.3	−39.4	−37.5	−44.5	−49.7	−10.5	−47.3	−53.2
24 States with regular annual seasonal variation [1]									
1944	8,678	1,172	923	636	1,276	4,671	915	6,747	1,016
1945	7,694	1,158	838	555	1,168	3,975	945	6,027	722
1946	4,453	799	480	344	643	2,187	793	3,232	428
Percent change, 1944–46	−48.7	−31.8	−48.0	−45.9	−49.6	−53.2	−13.3	−52.1	−57.9
7 States with irregular annual seasonal variation [2]									
1944	2,025	854	244	148	180	601	507	1,376	142
1945	1,680	712	236	122	131	479	452	1,114	114
1946	1,382	615	159	104	131	374	418	861	103
Percent change, 1944–46	−31.8	−28.0	−34.8	−29.7	−27.2	−37.8	−17.6	−37.4	−27.5
18 States with no regular annual seasonal variation [3]									
1944	768	178	109	71	77	333	162	526	80
1945	679	159	84	94	74	268	166	455	58
1946	723	166	134	86	76	261	207	467	49
Percent change, 1944–46	−5.9	−6.7	+22.9	+21.1	−1.3	−21.6	+27.8	−11.2	−38.8

[1] 24 States: Alabama, Arizona, Arkansas, California, Colorado, Delaware, Florida, Georgia, Indiana, Kentucky, Louisiana, Maine, Maryland, Mississippi, Missouri, New Mexico, North Carolina, Ohio, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

[2] 7 States: Illinois, Michigan, District of Columbia, New Jersey, Pennsylvania, and Washington.

[3] 18 States: Connecticut, Idaho, Iowa, Kansas, Massachusetts, Minnesota, Montana, Nebraska, Nevada, New Hampshire, North Dakota, Oregon, Rhode Island, South Dakota, Utah, Vermont, Wisconsin, and Wyoming.

States which were classified as having regular annual seasonal variation during the 1941–1945 period than with the States which were classified as having either irregular or no seasonal variation.

Table 2 shows population size group of decedents, under 2 years of age, from diarrheal diseases by State groups and for the United States, 1944, 1945, and 1946, and the percentage of change from 1944 to 1946. For the United States from 1944 to 1946 there was a decrease of 49.7 percent in rural decedents from the causes studied; 44.5 percent decrease in the 2,500–10,000 population size group; 37.5 percent decrease in the 10,000–25,000 group; 39.4 percent in the 25,000–100,000 group;

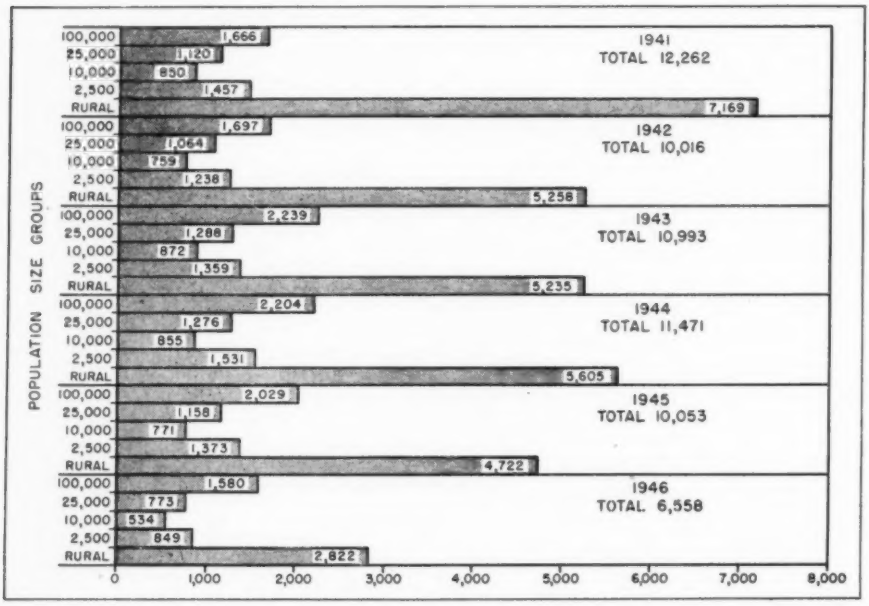

Figure 3. Deaths from dysentery and diarrheal diseases under 2 years of age by population size groups, 1941–1946, inclusive (International List of Causes of Death—Codes 27 and 119)

and 28.3 percent decrease in the 100,000-plus group. In each population size group, the 24-State group having regular annual seasonal variation showed a greater percentage decrease than did the United States total. The 18 States having no seasonal variation showed an increase of deaths from the causes studied of more than 20.0 percent in the population size groups 10,000–25,000 and 25,000–100,000; a decrease of 21.6 percent among rural decedents; a decrease of 1.3 percent in the 2,500–10,000 group and a decrease of 6.7 percent in the 100,000-plus group. The group of 7 States having irregular annual seasonal incidence showed decreases in mortality from the causes studied by population size groups in a pattern resembling more closely the 24 "regular" State group than that of the 18-State group which had no regular seasonal variation.

There were 11,471 deaths under 2 years of age from the causes studied in the United States during 1944 and 6,558 similar deaths during 1946. This was a reduction of 4,913 or 42.8 percent in the number of these deaths from 1944 to 1946. Table 2 shows that there was 53.2 percent fewer deaths in the rural areas of the 24 "regular" States during 1946 than during 1944.

Figure 3 shows population size group of decedents from diarrheal disease under 2 years of age for the United States. Decedents from rural areas constituted the largest number of deaths each year from 1941 to 1946, while those residing in the population group of 100,000-

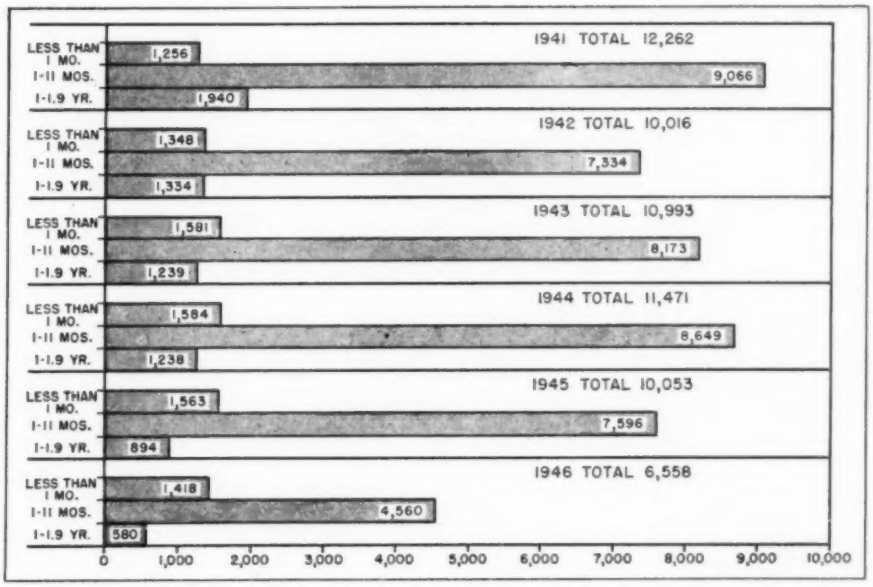

Figure 4. Deaths from dysentery and diarrheal diseases under 2 years by age of decedents, 1941–1946, inclusive (International List of Causes of Death—Codes 27 and 119).

and-over provided the second largest number of deaths each year. The factors operating during 1942 and during 1946 to decrease diarrheal disease mortality were proportionately more effective among rural than among nonrural populations.

Figure 4 shows age of diarrheal disease decedents under 2 years of age for the United States from 1941 to 1946. Approximately 90 percent of these deaths under 2 years of age occurred in the under-1-year-of-age group.

Table 2 also shows deaths in age groups by classification of States on annual seasonal variation of diarrheal disease mortality and percentage of decrease from 1944 to 1946. The factors which were operating to reduce deaths under 2 years of age from these causes were more effective among those over 1 month of age.

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During 1946, houses and privies in portions or all of the rural areas of 284 counties of 13 states (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee and Texas) which are among the 24 states of regular seasonal variation of table 2 were included in governmental residual DDT programs for the purpose of minimizing malaria transmission. Of these 284 counties, 122 had DDT programs during 1945 and 162 began these programs in 1946. Concurrently with the DDT treatment, there resulted a notable decrease of flies and other insects within houses and privies. These circumstances afforded an opportunity to study mortality from diarrheal disease in the rural population of these 284 counties in comparison

Table 3. *Deaths from dysentery and diarrheal diseases, under 2 years of age, in rural areas of 24 States having "regular" annual seasonal variation, by counties with DDT programs, and remaining 1,579 counties of 24 States, 1944–46, inclusive*

Year	122 counties with DDT programs in 1945 and 1946		162 counties with DDT programs beginning in 1946		Remaining 1,579 counties of 24 States	
	Deaths	Percent change 1944–46	Deaths	Percent change 1944–46	Deaths	Percent change 1944–46
1944	642		381		3,645	
1945	423	−34.1	317	−16.8	3,231	−11.4
1946	233	−44.9	166	−47.6	1,782	−44.8
Total	1,298	−63.7	864	−56.4	8,658	−51.1

with similar mortality among rural populations of the remaining 1,579 counties of the 24 States having similar seasonal variations of these deaths. Mortality data used in this study are county-wide although DDT programs did not always encompass all rural areas, since only the malarious areas were included in the programs.

Table 3 shows rural decedents from diarrheal disease for the 122 counties having DDT programs in 1945 and again in 1946, and for the 162 counties beginning DDT programs in 1946, for the remaining 1,579 counties of the 24 States having regular seasonal variation, and the percentage change from 1944 to 1946. There was approximately twice as great a decrease from 1944 to 1945 among rural decedents of 122 counties where DDT programs were carried out during 1945 as among rural decedents of 162 counties which began DDT programs in 1946, and approximately three times greater than among the remaining 1,579 counties of the 24 States. From 1945 to 1946, the decrease for each group of counties shown in table 3 was quite similar.

Table 4 shows rural decedents of 36 counties of Arkansas and Mississippi having DDT programs during 1945 and 1946 and similar deaths in the remaining 121 counties of Arkansas and Mississippi, 1944 to 1946. This study was made because these 36 counties were

in the same continuous geographic location of the Mississippi Delta Region; population, topography, climate, industry, and rural living conditions were comparable; extent of the coverage of rural houses and privies with DDT was comparable, and the remainder of each State outside the DDT program counties was similar. From 1944 to 1945, rural decedents, from the causes studied, decreased in the counties having DDT programs by 57.8 percent while the remainder of the 2 States decreased by 5.4 percent; from 1945 to 1946, the 36 counties decreased 59.7 percent while the remainder of the 2 States decreased 63.5 percent.

DDT became available to the public during the fall months of 1945 and was readily available to the public generally during 1946. There

Table 4. *Deaths from dysentery and diarrheal diseases, under 2 years of age, in rural areas of 36 counties of Arkansas and Mississippi with DDT programs during both 1945 and 1946, and in the remaining 121 counties of Arkansas and Mississippi, 1944–46, inclusive.*

Year	36 counties with DDT programs in 1945 and 1946		Remaining 121 counties of 2 States	
	Deaths	Percent change, 1944–46	Deaths	Percent change, 1944–46
1944	147		168	
1945	62	−57.8	159	−5.4
1946	25	−59.7	58	−63.5
Total	234	−83.0	385	−65.5

had been a great amount of publicity on the merits of DDT prior to its release for public consumption. During 1946, many governmental agencies including the United States Department of Agriculture, State and county agricultural agencies, and State and local health departments advised the use of DDT in programs which tended to reduce insects in rural homes. In addition, DDT was used in large quantities by manufacturers of insecticides as soon as the chemical was made available and exterminators made wide use of these insecticides. Combined effects of this general publicity, availability of DDT preparations, and the extensive programs fostered among rural inhabitants were sufficient to have brought DDT into use among a large proportion of rural householders in practically all counties of the United States during 1946.

The implication of flies in transmission of diarrheal diseases, the seasonal decrease of deaths from the causes studied, and the known effectiveness of DDT as an insecticide within houses lends credence to the general use of DDT being a factor in the decrease noted in diarrheal disease mortality from 1944 to 1946. The decrease from 1941 to 1942 was probably not due to the general use of household insecti-

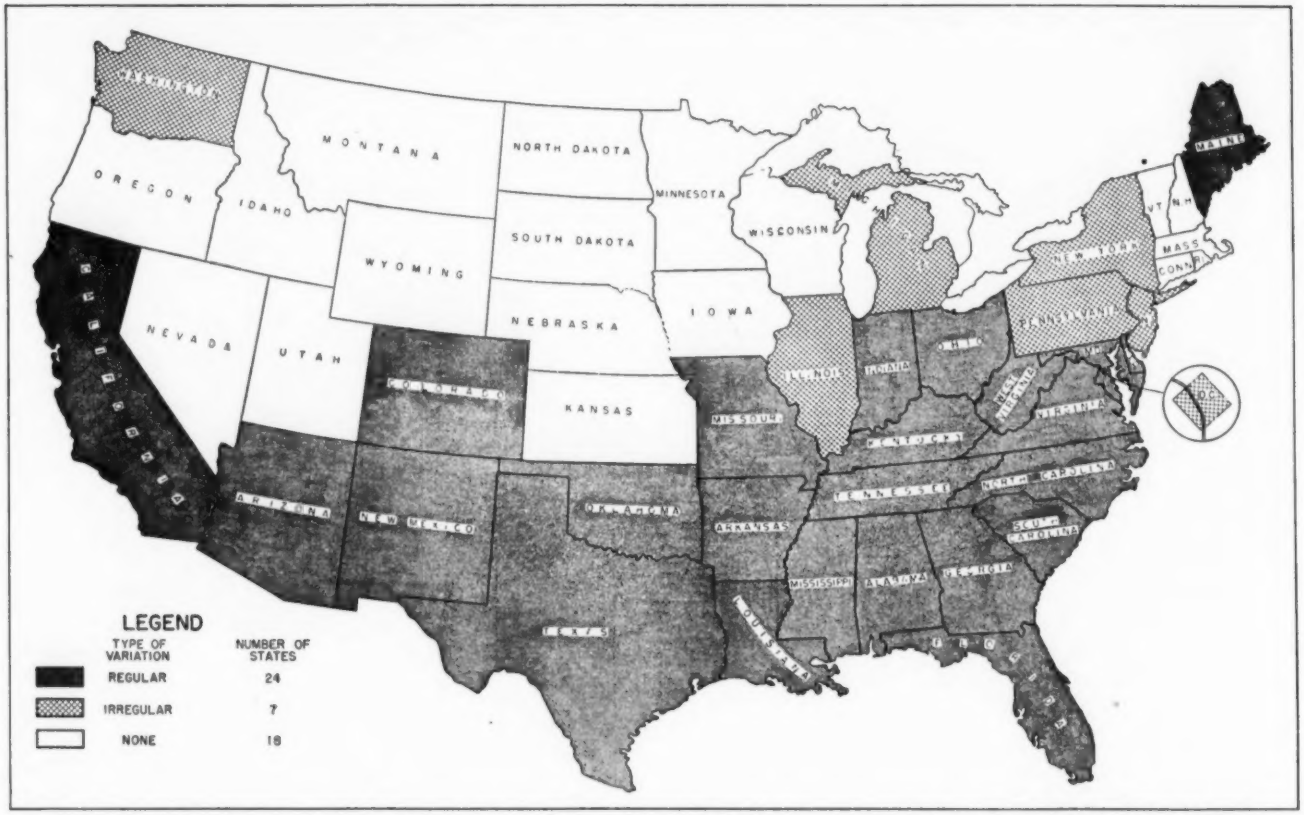

Figure 5. States by type of annual seasonal variations of diarrheal disease deaths under 2 years, 1941–1945, inclusive (International List of Causes of Death—Codes 27 and 119)

cides. This study does not attempt to define the proportionate part which DDT or any other factor may have played in the 1944 to 1946 decrease.

Beginning shortly after the cessation of hostilities in August 1945, physicians, health officers, nurses, sanitary engineers, and other health specialists returned from military to civilian services. Physicians were indoctrinated in the use of chemotherapy of infectious dysentery while serving with the Armed Forces. Their influence certainly should be considered as having been conducive to the reduction of mortality from the diseases considered in this study. This is especially true since it has been shown that specific and supportive therapy is highly effective in reducing mortality among those contracting shigellosis, which occurs primarily during the season in which the decrease of 1946 was noted.

Materials for the improvement of housing as well as refrigeration and other food-care facilities were available in greater quantity during 1946 than they had been during the war years. These are factors which may have contributed to the decrease of 1946. It is well known that these materials and facilities became available in small quantities and were not normally available to the public during 1946. Certainly these could not be described as major factors in the decrease of 1941–1942 when they were highly restricted commodities. Since mortality from diarrheal disease has been shown to be very largely among infants and those of early childhood, a decided decrease in birth rate might be considered as a factor. This hypothesis need be given no consideration in view of the extremely high birth rates in the United States throughout the entire period 1941 to 1946 (*12*).

It has been shown in this study that a very large proportion of the problem of diarrheal disease mortality has been among the rural-population group throughout 1941–1946, and that a disproportionate part of the decrease of both 1942 and 1946 was among the rural population as shown in figure 3. A shift of population from rural areas should be considered as a contributing factor. Using estimates of rural-farm migration as a criterion, there is considerable evidence that such a migration took place during 1941–1946. Estimates show that there was a decrease in rural-farm population of approximately 16.0 percent from 1940 to 1945 and a decrease of approximately 8.0 percent from 1940 to 1946 (*14*). The rural to urban shift in population may have contributed to the decrease in decedents from diarrheal diseases during 1942. It is obvious that shift of rural population to urban areas did not contribute to the precipitous decrease in rural decedents from diarrheal diseases during 1946.

Evidence presented in this study indicates that therapy against shigellosis could have played a significant part in decreasing mortality

from the causes shown. Validation of this evidence would require showing that higher proportions of infant mortality from diarrheal diseases are due to shigellosis among rural than among nonrural populations and that the release of medical, nursing, and public health personnel from the Armed Forces benefited rural populations (in terms of preventing larger numbers of infant deaths from diarrheal diseases) more than urban populations.

Causes of the precipitous decrease of mortality from dysentery and diarrheal diseases during 1946 are not specifically determined by this presentation. This study indicates that improved therapy of the diarrheal diseases and a wide-spread use of DDT by householders were probably the two more important factors which were considered in the precipitous decrease of mortality from diarrheal diseases during 1946.

Summary

1. Trends of mortality from the causes of diarrheal deaths studied have been downward for the period 1933 to 1946, inclusive. The decrements during this period have been spasmodic rather than regular. The most significant annual decrement during the period came in 1946.

2. The decrease in mortality from diarrheal disease of 1946 occurred primarily in the summer and fall months. The winter-spring level remained constant during the period 1941 to 1946, inclusive.

3. Decedents under 2 years of age from the causes studied were most frequently from rural areas; the large majority were under 1 year of age.

4. Of the factors which were considered, those which can be most satisfactorily attributed to the decrease of 1946 are improved medical treatment and the wide-spread use of DDT.

ACKNOWLEDGMENT

The author obtained much of the information contained herein from various government sources which are referred to in the text, and desires to express his thanks to these government agencies and their representatives. In particular, valuable professional assistance and advice were contributed by Dr. R. A. Vonderlehr, Medical Director in Charge, Dr. Justin M. Andrews, Deputy Officer in Charge, and Dr. A. J. Aselmeyer, Chief, Epidemiology Division, all of the Communicable Disease Center; Dr. Halbert Dunn, Chief, and Howard West of the National Office of Vital Statistics; Dr. J. C. Peterson of Vanderbilt University; and Dr. P. C. Jeans of the University of Iowa.

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Q Fever Studies in Southern California

VIII. Recovery of *Coxiella burneti* from butter made from naturally infected and unpasteurized milk [1]

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The recovery of Q fever organisms from the raw milk of four dairies in Los Angeles County, Calif., was reported by Huebner et al. (*1*). The strains isolated were identified by all accepted criteria as *Coxiella burneti*. Subsequently, raw-milk samples from other dairies and from many cows in the same area were found to be infectious.

Because these raw-milk samples were infectious, the possibility was considered that Q fever organisms might persist in milk products that are not subjected to pasteurization or cooking. The presence and persistence of infectious *C. burneti* in butter made from naturally infected milk are reported here.

Experimental

On April 10, three gallons of raw whole milk were obtained from Dairy No. 4, milk from which was shown to be infectious in earlier tests (*1*). Two guinea pigs were each injected with 5 cc. of this milk to determine its infectivity.

One-half pint of commercial buttermilk was added to the milk as "starter" to hasten the souring process. The milk was then distributed into clean quart milk bottles for cream separation and souring. It was held at room temperature. On April 11, it was distinctly sour. On April 12, the cream layer was removed from the bottles and placed in a small hand churn. Churning required about one hour of agitation. When the butter globules were about the size of peas the buttermilk was drained off, the butter washed once with water, drained, and distributed into sterile vials. No salt was added to the butter.

At the Q Fever Laboratory in Hondo, two guinea pigs were each injected subcutaneously with 1 cc. of the fresh butter by using a hypodermic syringe and an 18-gauge needle. The inoculum was distributed into seven or eight separate areas on the belly of each animal to facilitate absorption. Two other guinea pigs were each injected with 2 cc. of the fresh buttermilk.

[1] This study has been facilitated by the Q Fever Laboratory, which was established September 12, 1947, in the endemic area of Southern California, as a cooperative undertaking of the National Institutes of Health, the California State Department of Public Health, the California State Department of Agriculture, and the Los Angeles County Health Department.

[2] The Rocky Mountain Laboratory, Public Health Service, Hamilton, Montana.

[3] The National Institutes of Health, Public Health Service, Bethesda, Maryland.

[4] The California State Department of Public Health.

On May 23, after 41 days of storage at below freezing temperature, the butter was again tested. Two guinea pigs were each injected subcutaneously with 2.5 cc. of butter, the inoculum being distributed in the manner previously noted.

Immediately after the butter was churned, four vials were sent under refrigeration to the Rocky Mountain Laboratory where the contents of each vial was tested in two guinea pigs. Each test animal received 5 cc. of butter intraperitoneally. This was 7 days after preparation of the butter.

Results

The test animals injected with the fresh milk, the freshly churned butter, and the buttermilk all survived and were bled in 30 days. The serums were tested for Q fever antibodies and all were positive at high titer. Of the two test animals injected with butter after 41 days of storage at below freezing temperature, one died on the ninth day of test from undetermined cause. The other was bled on the thirty-second day and the serum sample was positive at high titer.

Of the eight animals injected with butter at the Rocky Mountain Laboratory, three died before the end of the test period; one was sacrificed for transfer, and a strain of Q fever was established. The four remaining animals were bled on the twenty-ninth day after injection, and all serums were positive at high titer.

Summary

Fresh milk from a dairy, the raw milk from which was known to contain *Coxiella burneti*, was used without pasteurization for the preparation of butter. The serums of guinea pigs (taken from survivors 29 to 32 days after injection) used to test the fresh milk, butter, and buttermilk were serologically positive for Q fever. Refrigerated butter was still infectious 41 days after preparation. A passage strain of Q fever was established from one of the test animals.

REFERENCE

(*1*) Huebner, R. J., Jellison, W. L., Beck, M. D., Parker, R. R., and Shepard, C. C.: Q fever studies in Southern California. I. Recovery of *Rickettsia burneti* from raw milk. Pub. Health Rep. **63**: 214–222 (1948).

Q FEVER STUDIES IN SOUTHERN CALIFORNIA SERIES

This article is the eighth in the series of Q fever studies in California. Already published in PUBLIC HEALTH REPORTS, Vol 63, are: I. Recovery of *Rickettsia burneti* from raw milk, pp. 214–222; IV. The occurrence of *Coxiella burneti* in the spinose ear tick, *Otobius megnini*, pp. 1483–1489; V. Natural infection in a dairy cow, pp. 1611–1618. To be published are: II. Epidemiology; III. Pasteurization of milk naturally infected with *Coxiella burneti;* VI. Studies of serum antibodies and milk infection in cows of a native herd; VII. Comparative infectivity studies of milk, blood, urine, and feces from naturally infected dairy cows.

813320—48——3

Regular Corps Examination for Dietitians

A competitive examination for appointment of dietitian officers in the Regular Corps of the Public Health Service will be held on February 28, March 1 and 2, 1949. Appointments will be made in the grades of Junior Assistant Dietitian (2d Lt.), Assistant Dietitian (1st Lt.), and Senior Assistant Dietitian (Capt.).

A junior assistant dietitian, must be a United States citizen, at least 18 years of age, and a graduate from an approved college with a baccalaureate degree, majoring in foods and nutrition or institutional management. An assistant dietitian must, in addition to the above requirements, be at least 21 years of age, have completed an approved dietetic internship, and have had a total of 7 years or more of educational training and professional experience subsequent to high school. The senior assistant dietitian must, in addition to the above requirements, have had at least 3 years of additional educational training or professional experience (a total of 10 years or more subsequent to high school).

The professional written examination will cover general and food chemistry, bacteriology and physiology, normal and advance nutrition, diet in disease, meal planning and quantity cooking, institutional management, educational psychology and teaching methods.

Examinations will be held at Baltimore, Norfolk, New Orleans, San Francisco, Seattle, Chicago, Cleveland, Detroit, Boston, Memphis, Kirkwood (Mo.), Staten Island, Los Angeles, Lexington (Ky.), Fort Worth, Kansas City (Mo.), Denver, Atlanta.

Entrance pay (per annum).

Rank	Base pay	Rental and subsistance allowance (without dependents)	Total	Rental and subsistance allowances (with dependents)	Total
Junior Assistant	$2,160	$795.50	$2,955.50	$1,231	$3,391
Assistant	2,400	975.50	3,375.50	1,411	3,811
Senior Assistant	2,898	1,155.50	4,053.50	1,591	4,489

Application forms and additional information about extra benefits may be obtained by writing to the Surgeon General, Public Health Service, Washington 25, D. C. Attention: Division of Commissioned Officers.

Completed applications must be received not later than February 1, 1949.

INCIDENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

REPORTS FROM STATES FOR WEEK ENDED DECEMBER 11, 1948

Summary

A total of 345 cases of poliomyelitis was reported during the week (a net decline of 95 cases), as compared with 241, the largest number for a corresponding week of the past 5 years, reported in 1946, and a 5-year (1943–47) median of 133. No State reported more than 24 cases except California, 122. Of the 8 States reporting more than 10 cases, 4 showed a combined decline of 61 cases, while 4 States (Wisconsin, North Carolina, Texas, and Washington) with a combined report of 69, showed an increase of 27 cases. The total for the year to date is 27,017, same period in 1946 and 5-year median, respectively, 24,763 and 13,443.

Only a slight increase was reported in the incidence of influenza, 2,730 cases for the week, last week 2,492. The 5-year median is 3,008. Of the current total only 4 States reported more than 68 cases—Virginia 255, last week 386; South Carolina 191, last week 152; Texas 1,758, last week 1,444; Arizona 118, last week 114. Of the total of 28,640 cases reported since July 31 (average date of seasonal low incidence), these 4 States reported 24,373. For the same period last year they reported 20,873 of the total of 25,204 cases.

Of the total of 6,280 cases of measles (last week 5,393, 5-year median 2,787), only 11 States (with a combined total of 4,726, last week 3,639) reported more than 168 cases. States reporting the largest numbers are Massachusetts 1,035 (last week 1,080), Texas 731 (last week 511), Pennsylvania 481 (last week 401), New York 466 (last week 364), and Michigan 416 (last week 171). The total since September 4 is 33,212, the largest number reported for a corresponding period since 1943 (41,442). The 5-year median is 18,238.

During the week, 1 case of anthrax was reported, in Pennsylvania, and 1 case of smallpox, in Texas.

Deaths recorded during the week in 93 large cities in the United States totaled 9,423, as compared with 9,654 last week, 9,942 and 9,612, respectively, for the corresponding weeks of 1947 and 1946, and a 3-year (1945–47) median of 9,942. For the year to date the total is 458,185, as compared with 459,534 for the same period last year. Infant deaths during the week totaled 679, last week 701, 3-year median 697. The cumulative figure is 33,223, same period last year, 36,592.

Telegraphic case reports from State health officers for week ended December 11, 1948

[Leaders indicate that no cases were reported]

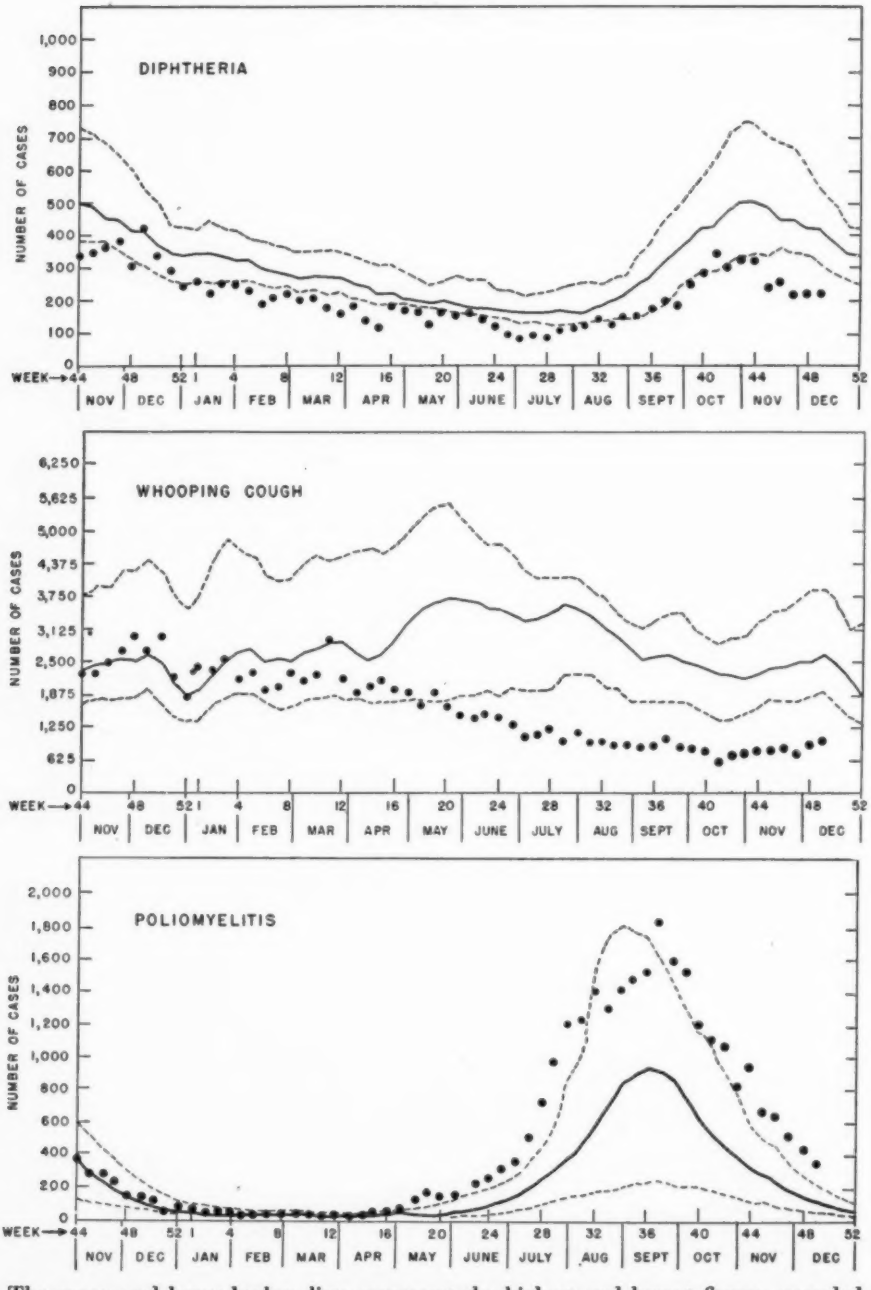
Division and State	Diphtheria	Encephalitis, infectious	Influenza	Measles	Meningitis, meningococcal	Pneumonia	Poliomyelitis	Rocky Mountain spotted fever	Scarlet fever	Smallpox	Tularemia	Typhoid and paratyphoid fever *	Whooping cough	Rabies in animals
NEW ENGLAND														
Maine	1		1	336		1	1		30				18	
New Hampshire			1	3		2			6				1	
Vermont	1			199			2		4					
Massachusetts	9			1,035	2	37			169			1	65	
Rhode Island	1			25		5			8				5	
Connecticut				48	4	25	2		34			1	9	
MIDDLE ATLANTIC														
New York	12	1	[b]3	466	6	208	7		184			5	177	6
New Jersey	3		5	77	1	58	4		72			1	82	3
Pennsylvania	9		(b)	481	6		5		138		2	1	144	3
EAST NORTH CENTRAL														
Ohio	5		1	21	2	72	8		203		1	1	36	15
Indiana	11		2	44		10	2		42		3		11	27
Illinois	2	1	14	26	1	121	9		136		7	1	30	2
Michigan *	4		1	416	1	35	7		192			2	18	
Wisconsin				304	1	7	11		62				46	1
WEST NORTH CENTRAL														
Minnesota	1			11		3	22		67				4	
Iowa		1		3	3		19		41			1	4	
Missouri	4	1	4	93	2	20	1		23		1		11	
North Dakota				76			4		12				3	
South Dakota		9		2			14							
Nebraska	2		15	10		6	1		22		1			
Kansas	3	1	1	17		13			33				6	
SOUTH ATLANTIC														
Delaware				1		2			3					
Maryland *			1	280	1	31	4		21		1	1	29	
District of Columbia				13	1	12	1		7				4	
Virginia	8		255	168	2	38	2		26		1	1	54	2
West Virginia	1		48	2	3	11	2		31			2	14	
North Carolina	9			146		16	24		51		1	2	8	
South Carolina	18		191	6	2	42	4		6		2	1	11	7
Georgia	21		11	10		16	1		30		5	2		8
Florida	6		13	33	1	22	1		6		1	2	9	4

EAST SOUTH CENTRAL														
Kentucky	11		1	96	2	27	3		68				14	25
Tennessee	7	2	23	38	1	67	2		71		2	1	26	
Alabama	11		6	61	3	59	2		28		1	2	5	5
Mississippi [a]	8		9	14	2	17			7		1	8	6	
WEST SOUTH CENTRAL														
Arkansas	6		68	56		22	3		2			1	10	
Louisiana	1	1	7	61	5	41	1		8			3	3	
Oklahoma	4		48	52		23			22		1		6	7
Texas	13		1,758	731	8	141	19		43	1		2	85	36
MOUNTAIN [b]														
Montana				6	1				20			1		
Idaho			44	16	2	9	3		[d] 16					
Wyoming				16		2			7		1		1	
Colorado	2		25	51		19	3		10				6	
New Mexico	3		2	9		11	2		12			5	1	
Arizona	6		118	40		18	1		2				2	1
Utah [a]	2			97		2	4		9				7	
Nevada				1			1							
PACIFIC														
Washington	8		42	105	2	2	14		34				11	
Oregon	1		7	211		16	7		24			4	9	
California	6		5	267	2	25	122		90			5	49	6
Total	220	17	2,730	6,280	67	1,298	345		2,132	1	32	57	1,040	
Median, 1934–47	415	8	3,008	2,787	118		133	1	2,901	7	35	52	2,432	
Year to date, 49 weeks	9,128	545	167,455	584,626	3,094		27,017	519	72,609	57	931	3,459	70,856	
Median, 1943–47	13,018	608	214,299	580,588	7,618		13,443	465	131,727	333	753	4,720	118,689	
Seasonal low week ends	(27th)		(30th)	(35th)	(37th)		(11th)		(32nd)	(35th)		(11th)	(39th)	
	July 10		July 31	Sept. 4	Sept. 18		Mar. 20		Aug. 14	Sept. 4		Mar. 20	Oct. 2	
Since seasonal low week	4,518		28,640	33,212	658		26,667		16,993	7		2,986	7,933	
Median, 1943–47	6,696		25,204	18,238	1,123		13,046		31,081	60		4,096	21,153	

[a] Including paratyphoid fever, reported separately, as follows: Michigan 2; South Carolina 1; Texas 1; California 5.
[b] New York City and Philadelphia only, respectively.
[c] Period ended earlier than Saturday.
[d] Including cases reported as streptococcal infection and septic sore throat.
Anthrax: Pennsylvania 1 case.
Alaska: Pneumonia 1.
Territory of Hawaii: Measles 280; lobar pneumonia 3.

Communicable Disease Charts

All reporting States, November 1947 through December 11, 1948



The upper and lower broken lines represent the highest and lowest figures recorded for the corresponding weeks in the 7 preceding years. The solid line is the median figure for the 7 preceding years. All three lines have been smoothed by a 3-week moving average. The dots represent numbers of cases reported for the weeks of 1948.

TERRITORIES AND POSSESSIONS

Puerto Rico

Notifiable diseases—4 weeks ended November 27, 1948.—During the 4 weeks ended November 27, 1948, cases of certain notifiable diseases were reported in Puerto Rico as follows:

Disease	Cases	Disease	Cases
Chickenpox	5	Syphilis	148
Diphtheria	40	Tetanus	10
Dysentery, unspecified	6	Tetanus, infantile	5
Gonorrhea	194	Tuberculosis (all forms)	394
Influenza	505	Typhoid fever	4
Malaria	74	Typhus fever (murine)	1
Measles	209	Whooping cough	77

DEATHS DURING WEEK ENDED DEC. 4, 1948

[From the Weekly Mortality Index, issued by the National Office of Vital Statistics]

	Week ended Dec. 4, 1948	Corresponding week, 1947
Data for 93 large cities of the United States:		
Total deaths	9,654	10,096
Median for 3 prior years	9,945	
Total deaths, first 49 weeks of year	448,762	449,592
Deaths under 1 year of age	701	724
Median for 3 prior years	724	
Deaths under 1 year of age, first 49 weeks of year	32,544	35,895
Data from industrial insurance companies:		
Policies in force	70,788,242	67,020,343
Number of death claims	12,633	13,230
Death claims per 1,000 policies in force, annual rate	9.3	10.3
Death claims per 1,000 policies, first 49 weeks of year, annual rate	9.1	9.2

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended November 20, 1948.—Cases of certain communicable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Chickenpox		29	1	380	466	76	126	117	345	1,540
Diphtheria				16	1		1		1	19
Dysentery, bacillary				1						1
German measles				26	6		3	25	8	68
Influenza		22			3	1				26
Measles		69	1	399	83	52	88	80	93	865
Meningitis, meningococcal				2	1					3
Mumps		33		87	152	56	11	9	77	425
Poliomyelitis					8	4	1	4		17
Scarlet fever		5	9	112	68	7	7	11	15	234
Tuberculosis (all forms)		3	3	58	37	20	9	13	30	173
Typhoid and paratyphoid fever				8			1			9
Undulant fever				9	3					12
Venereal diseases:										
Gonorrhea		9	11	94	78	23	14	39	84	352
Syphilis		12	7	77	40	10	8	8	15	177
Whooping cough		25		169	27	3	5	10		239

JAMAICA

Notifiable diseases—4 weeks ended October 30, 1948.—Cases of certain notifiable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Others localities
Chickenpox	2	5	Puerperal sepsis		2
Diphtheria	2	2	Scarlet fever	1	
Dysentery, unspecified	1		Tuberculosis (pulmonary)	55	50
Erysipelas		3	Typhoid fever	5	66
Leprosy	1	8	Typhus fever (murine)	1	
Poliomyelitis		1			

POLIOMYELITIS

Iceland.—Information from Reykjavik, dated November 24, 1948, states that poliomyelitis (infantile paralysis) is prevalent in the Akureyri district, Iceland. One hundred twenty-five cases have been reported, of which eight are stated to be serious. No cases have been reported outside of the Akureyri area.

New Zealand—1947–1948.—From October 25, 1947, to March 31, 1948, a total of 303 cases of poliomyelitis with 18 deaths was reported in New Zealand, confined mainly to Auckland and South Auckland Health Districts. Of these cases, 211 were in children under 15 years of age, and 64 in persons over 20 years. Of 275 patients, 92 had some degree of paralysis, 83 had paresis but no paralysis, and 100 had neither paralysis nor paresis.

Nicaragua—Managua.—Information received December 13, 1948, reports 13 cases of poliomelitis in Managua, Nicaragua.

WORLD DISTRIBUTION OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

From consular reports, international health organizations, medical officers of the Public Health Service, and other sources. The reports contained in the following tables must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

CHOLERA

[C indicates cases]

NOTE.—Since many of the figures in the following tables are from weekly reports, the accumulated totals are for approximate dates.

Place	January–September 1948	October 1948	November 1948—week ending—			
			6	13	20	27
AFRICA						
Egypt	1					
Cairo	1					
ASIA						
Burma [1]	44	1				
Akyab [1]	5					
Bassein	1					
Moulmein		1				
Rangoon	2					
China:						
Hupeh Province	3					
Wuchang	3					
Kiangsi Province	[2] 9					
Kiangsu Province	2					
Shanghai	1					
India	148,859	10,998	1,700	955	520	
Ahmadabad	76	1				
Allahabad [1]		3	2	1		
Alleppey	1					
Bombay [1]	40	4				
Calcutta [1]	7,246	251	59	56	73	74
Cawnpore	156	1				
Cocanada	15					
Colachel	12					
Cuddalore	13	23				
Jodhpur [1]	56					
Kilakarai	21					
Lucknow	44	4				
Madras	382	677	29	11	12	19
Masulipatam		32				
Nagpur	71					
Negapatam	16		1			
New Delhi	26					
Raj Samand	6					
Tuticorin	16					
Vizagapatam	1					
India (French):						
Chandernagor	21					
Karikal	300					
Pondicherry	413	7				
Yanaon		2				
India (Portuguese)	29					
Indochina (French):						
Annam	[3] 22	[2] 19				4
Cambodia	1,347	2		5		
Cochinchina	588	4		1		
Bien Hoa	1					
Chaudoc	2					
Cholon	29					
Giadinh	23					
Longxuyen	7					
Mytho	56					
Rachgia	132	1				
Saigon	136					
Laos	[4] 32					
Tonkin	20					
Pakistan	26,014	1,064	6			5
Chittagong	34	1	6			
Karachi	4					
Lahore	296	105				5
Siam	43					
Syria	3					

[1] Includes imported cases.
[2] Suspected.
[3] Includes suspected cases.
[4] Includes 12 deaths reported as cases in February 1948.

PLAGUE

(Cases)

Place	January–September 1948	October 1948	November 1948—week ending—			
			6	13	20	27
AFRICA						
Belgian Congo	17	1		2		
Costermansville Province	11					
Stanleyville Province	6	1		2		
British East Africa:						
Kenya	32	5				
Tanganyika	279	17				
Madagascar	367	13		[1] 5	[2] 1	
Tamatave	1					
Tananarive	32	1			1	
Rhodesia, Northern	26					
Union of South Africa	[3] 38	4	1			
ASIA						
Burma [4]	727	93	1	4	2	
Mandalay	17	1				
Rangoon	19					
China:						
Chekiang Province	37		1			
Wenchow	12					
Fukien Province	343					
Foochow	4					
Kiangsi Province	19	[5] 4				
Kwangtung Province	116					
Yunnan Province	99	36				
India	20,724	756	179	106	120	[6] 1
Indochina (French):						
Annam	156	35	1	6		36
Cambodia	3					1
Cochinchina	45			1		
Laos	2					
Mountain Area South-Indochina	12	10		1		
Java	[7] 1,108	55		[8] 2		
Pakistan	11					
Siam	117	5	2			
EUROPE						
Portugal: Azores	15					
SOUTH AMERICA						
Argentina	12					
Buenos Aires Province	9					
Brazil	60					
Alagoas State	22					
Bahia State	27					
Ceara State	5					
Pernambuco State	6					
Ecuador	36	2		[9] 3		
Chimborazo Province	1					
Loja Province	35	2		[9] 3		
Peru	22	12				
Cajamarca Department	11					
Libertad Department	1					
Lima Department	10	12				
Venezuela:						
Aragua State	7					
OCEANIA						
Hawaii Territory: Plague-infected rats [10]	5					

[1] Nov. 1–10, 1948.
[2] Nov. 11–20, 1948.
[3] Includes 4 cases of pneumonic plague.
[4] Includes imported cases.
[5] Suspected.
[6] In Calcutta.
[7] Including 1 case of pneumonic plague in Surabaya.
[8] In Surabaya.
[9] For the period Oct. 16–Nov. 15, 1948.
[10] Plague infection was also reported in Hawaii Territory, under date of Feb. 27, 1948, in a mass inoculation of tissue from 19 rats.

SMALLPOX

(Cases—P=present)

Place	January-September 1948	October 1948	November 1948—week ending— 6	13	20	27
AFRICA						
Algeria	317	15		[1] 9		
Angola [2]	401					
Basutoland	3					
Belgian Congo [2]	2,012	480	33	43	74	
British East Africa:						
Kenya	111	2	12	1	1	
Nyasaland	3,737	557	125	113	57	
Tanganyika [2]	989	103				
Uganda	205	2				
Cameroon (French) [2]	4					
Dahomey	420	25	[1] 6	[3] 11	[4] 12	
Egypt [5]	451	[6] 1	[7] [8] 1			[7] 1
Eritrea	9					
Ethiopia	20					
French Equatorial Africa	16					
French Guinea	132			[1] 1	[3] 3	
French West Africa: Haute-Volta	438					
Gambia	27					
Gold Coast	1,502	12				
Ivory Coast	694	35		[1] 29	[3] 9	
Libya	256	5				
Mauritania	1	1				
Mauritius	1					
Morocco (French)	35	1				
Mozambique	262	61				
Nigeria	4,085					
Niger Territory	367	2				
Rhodesia:						
Northern	627	35	11			
Southern	1,599	44				
Senegal	9					
Sierra Leone	189	7				
Sudan (Anglo-Egyptian) [2]	1,400	51				
Sudan (French)	17					
Swaziland	5					
Togo (British)	9					
Togo (French)	94	22				
Tunisia	525	11				
Union of South Africa	106	96	[9] 1	P		
ASIA						
Arabia	8					
British North Borneo	1					
Burma [5]	2,810	46	5	1	1	[9] 1
Ceylon [5]	22					
China [5]	3,760					[5] [10] 70
India	58,005	838	145	67	77	[11] 5
India (French)	6					
India (Portuguese)	[12] 162	3				
Indochina (French)	3,858	78	8	8	6	6
Iran	560	110				
Iraq [5]	920	111	22	36	127	119
Japan	27	4	1			
Java	1					
Lebanon [5]	61	6				
Macao Island: Macao	11					
Malay States (Federated)	462	67	4	4		
Manchuria	78					
Pakistan [5]	11,821	22			1	
Palestine	8					
Philippine Islands: Mindoro Island				91		
Siam [5]	518	15				
Straits Settlements: Singapore	13					
Sumatra [5]	1,699					
Syria	137	67	37	62	72	159
Transjordan	14			1		1
Turkey (see Turkey in Asia).						
EUROPE						
France	3					
Germany	3					
Greece	8					
Italy [5]	4	5				
Portugal	75	1				
Spain	19					
Canary Islands	9					
Turkey	4	16	2	9	7	

See footnotes at end of table.

SMALLPOX—Continued

Place	January–September 1948	October 1948	November 1948—week ending— 6	13	20	27
NORTH AMERICA						
British Honduras	2					
Guatemala	2					
Mexico	940	15				
SOUTH AMERICA						
Argentina	20	14	5		1	
Bolivia	31					
Brazil	244	[12] 5	[12] 1			
Chile	8					
Colombia	5,699	55	[10] 5	[14] 11		
Ecuador [2]	2,870	358		[15] 11	[16] 73	
Paraguay [2]	101					
Peru [2]	1,974					
Trinidad	[17] 12					
Venezuela [2]	4,112	51		[11] 2	[18] 1	

[1] Nov. 1–10, 1948.
[2] Includes alastrim.
[3] Nov. 11–20, 1948.
[4] Nov. 21–30, 1948.
[5] Includes imported cases.
[6] In Alexandria.
[7] In Suez.
[8] Imported.
[9] In Rangoon.
[10] 1 case in Shanghai week ended Nov. 27, 1948; 69 cases in Amoy, Oct. 17–Nov. 27.
[11] In ports only.
[12] Corrected figure.
[13] In Porto Alegre.
[14] In Medellin.
[15] In Guayaquil.
[16] For the period Nov. 1–15, 1948.
[17] Alastrim.
[18] In La Guaria.

TYPHUS FEVER *

(Cases)

(P = Present)

AFRICA						
Algeria	171	18		[1] 3		
Basutoland	9					
Belgian Congo	197	27	1		4	
British East Africa:						
Kenya [2]	69					
Zanzibar	1					
Egypt	306	54	2	1		
Eritrea	[3] 44	1		1		
Ethiopia	75					
French Equatorial Africa	1					
Gold Coast [2]	7					
Libya	483	8	1		1	
Madagascar: **Tananarive**	7					
Morocco (French)	77	2		[1] 1	[4] 1	
Morocco (International Zone)	5					
Morocco (Spanish) [2]	8					
Mozambique [2]	3					
Nigeria [2]	7					
Rhodesia (Southern)	[5] 1					
Senegal	[5] 4					
Sierra Leone	[5] 9					
Somalia	2					
Tunisia [2]	612	19				
Union of South Africa [2]	352	43	P	P	P	
ASIA						
Burma	5					
China [2]	168	9				
India: **Calcutta**	1					
India (Portuguese)	7					
Indochina (French) [2]	63	7				
Iran [2]	131	4				
Iraq [2]	200	4	2	4		2
Japan	458	3	3			
Java	3					
Manchuria	38					
Pakistan	22					
Palestine [2]	12					

See footnotes at end of table.

TYPHUS FEVER—Continued

Place	January–September 1948	October 1948	November 1948—week ending—			
			6	13	20	27
ASIA—continued						
Philippine Islands [2]	[6] 5					
Straits Settlements: Singapore [1]	20			1		
Syria [2]	58	1				
Transjordan	60					7
Turkey (see Turkey in Europe).						
EUROPE						
Albania	15					
Bulgaria	736	2	1			
Czechoslovakia	8					
France	5					
Germany:						
British Zone	8					
French Zone	12					
United States Zone	1					
Great Britain:						
Cyprus [4]	1					
England and Wales	[5] [7] 2					
London	[5] [7] 1					
Ireland (Northern)	[5] 2					
Malta [4]	16	1		5		
Greece [3] [6]	166	72	5	12	5	86
Hungary	55	1			1	2
Italy [2]	533	27				
Sicily	18					
Netherlands	[7] 1					
Poland	278	8	11			
Portugal—Madeira Islands:						
Funchal	1					
Rumania [2]	21,731	87	41	35		
Spain	20	1				
Turkey	312	19	9	8	8	6
Yugoslavia	579	13	3	2		
NORTH AMERICA						
Costa Rica [4]	18	3		1	1	
Cuba [4]	22					
Guatemala	106					
Jamaica [4]	18					
Mexico [2]	1,100	20				
Panama Canal Zone [2]	8					
Panama Republic	1					
Puerto Rico [4]	36	1				1
SOUTH AMERICA						
Argentina	20					
Bolivia	[8] 105					
Brazil	116	6	1	7		
Chile [2]	370	6				
Colombia [2]	2,487	128	9	13		
Curaçao [4]	15	1				
Ecuador [2]	377	[9] 40				
Peru	719					
Venezuela [2]	149	2			1	
OCEANIA						
Australia [4]	142	9	1			
Hawaii Territory [4]	12					
Honolulu	2					
New Caledonia	1					

*Reports from some areas are probably murine type, while others include both murine and louse-borne types.

[1] Nov. 1-10, 1948.
[2] Includes murine type.
[3] Corrected figure.
[4] Nov. 11-20, 1948.
[5] Murine type.
[6] Includes suspected cases.
[7] Imported.
[8] Includes 9 deaths reported as cases in Cochabamba Department in March 1948.
[9] Oct. 16-Nov. 15, 1948.

YELLOW FEVER

(C—cases; D—deaths)

Place		January-September 1948	October 1948	November 1948—week ending— 6	13	20	27
AFRICA							
Gold Coast:							
Kumasi	D	1					
Accra	D	2					—
Ivory Coast:							
Gagnao	D	1					
Sudan (French):							
Sebekoro	D		1				
SOUTH AMERICA							
Argentina:							
Cerro Azul, Misiones Territory	D	1					
Bolivia.[1]							
Brazil:							
Bahia State:							
Ilheus City, Itajuipe	D	1					
Ubaitaba County	D	[2] 1					
Rio Grande do Sul State:							
Sao Luiz Gonzaga	D	[3] 1					
British Guiana	D	[4] 1					
Colombia:							
Antioquia Department:							
Maceo	D	4					
Yolomba	D	1					
Boyaca Department:							
Campohermoso	D	1					
Caldas Department:							
La Dorado	D	1					
Samana	D	1					
La Victoria	D	1					
Cundinamarca Department:							
Medina	D	7					
Intendencia of Meta:							
Cumaral	D	1					
Restrepo	D	1					
San Martin	D	1					
Peru: [5]							
Loreto Department:							
Nauta, Loreto Province	D	1					
Venezuela:							
Boatanamo, Tumeremo County, Bolivar State	D		1				

[1] Delayed report: During the months of April and May 1947, 5 cases of yellow fever were reported in Bolivia, distributed as follows: Santa Cruz Department—Nuflo de Chavez 1, Concepcion 1, Cercado 1; La Paz Department—Province of Sud Yungas, Chulmani 1; Province of Nor Yungas, Coroico 1.

[2] Occurred in September 1948.

[3] Suspected.

[4] In forested area, 60 miles up Berbice River from Kwakwani.

[5] Delayed report: On July 23, 1948, 1 death from yellow fever was reported to have occurred in Tingo Maria, Huanoco Department, Peru, in the month of November 1947.

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It contains (1) current information regarding the incidence and geographic distribution of communicable diseases in the United States, insofar as data are obtainable, and of cholera, plague, smallpox, typhus fever, yellow fever, and other important communicable diseases throughout the world; (2) articles relating to the cause, prevention, and control of disease; (3) other pertinent information regarding sanitation and the conservation of the public health.

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Oscar R. Ewing, Administrator

PUBLIC HEALTH SERVICE

Leonard A. Scheele, Surgeon General

Division of Public Health Methods

G. St. J. Perrott, Chief of Division

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NOTE.—Address requests for reprints from Public Health Reports, Journal of Venereal Disease Information, and the Journal of the National Cancer Institute to the Surgeon General, Public Health Service, Washington 25, D. C.

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